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UNIVERSITY OF TORONTO
UNIVERSITY EXTENSION

Session 1957-58

Course in

**QUALITY CONTROL
THROUGH
STATISTICAL METHODS**

*Application forms and course literature
may be obtained from*

THE DIRECTOR,
University Extension,
65 St. George St.

UNIVERSITY OF TORONTO

*Phone WALnut 3-6611
Locals 304, 308, 528, 527*

in co-operation with the
TORONTO QUALITY CONTROL SOCIETY

QUALITY CONTROL THROUGH STATISTICAL METHODS

October 1957 — March 1958

Monday Evenings

20 Lectures

The Toronto Quality Control Society sponsors this Course designed for people in industry who desire to learn about this valuable method and to apply it immediately to their own everyday operating problems. Emphasis will be placed upon the principles of building quality into the product by keeping the various steps of the process within control.

The Course consists of 20 lectures, demonstrations, and practical periods. To derive maximum benefit, students are encouraged to enrol for the entire Course.

Requirements: High school or technical school education with a knowledge of elementary Algebra; familiarity with production and inspection systems of a manufacturing plant or industry.

LECTURER: R. A. Lucas, Project Manager of Quality Control, International Business Machines Company, Ltd.

TIME: Mondays, 7:30 p.m., October 7–December 16
January 6–March 10

PLACE: Room 202, Mechanical Building

FEE: \$40.00 for 20 sessions, including binder, special paper requisites and textbooks

REGISTRATION:

By mail or in person at Room 108, 65 St. George St.
In order to accommodate students and enable them to enrol during the evening, registrations will be taken—

Thursday,	September 12th
Tuesday,	September 17th
Thursday,	September 19th
Tuesday,	September 24th
Thursday,	September 26th
Tuesday,	October 1st

evenings, from 7.30 to 9 p.m., in the Wallberg Building, corner St. George and College Streets.

PROGRAMME

Introduction

1. An Introduction to Statistical Quality Control
Outline of principles and basic concepts

Measurements

2. Presentation of Data
The systematic collection of data
3. Frequency Distribution
A picture to see the variation pattern
4. Distribution Shift
Basic changes in manufacturing conditions
5. Control Charts
Calculating and Plotting—the application of "x" and "R" charts
6. Control Limits
Application of control limits to data

Counts

7. Expected Frequency
Basic sampling systems
8. Acceptance by Sampling
A break even point for inspection
9. Binomial Distribution
Calculations of "c" and "p" charts
10. Sampling Tables
Application of tables for calculated risk
11. Operating Characteristics
Probability of Acceptance with sampling plans
12. Organization
Quality Control functional layouts

Advanced Techniques

13. Introduction to Industrial Experimentation
Estimate of experimental error
14. Fundamental Statistical Conceptions
Statistical terminology
15. Tests for Significance
Application of "t" test
16. Tests for Significance
Application of "F" test
17. Comparison of Variance
To compare means or spreads of numbers
18. The Chi Square Test
To determine whether the frequency in a sample is significant
19. Analysis of Variance
A study of cause and effect relationship
20. Correlation
To study the effect of independent variables